CLAIMS

1. An axial flow type cooling fan, comprising:

an upper casing;

a lower casing, attached to said upper casing and together with said upper casing enclosing an inner space;

a rotor assembly, housed in said inner space and performing a rotational movement, further comprising a plurality of blades, attached to a central shaft and having a peripheral ring, from which a peripheral rim extends outward; and

a driving unit, having electric coils on said upper or lower casings and permanent magnets on said peripheral rim, causing said rotational movement of said rotor assembly;

wherein an increased area of air flow and consequently increased air flow are attained, while drag and noise are reduced, rotational stability is increased and a flatter shape is allowed for.

2. The axial flow type cooling fan according to claim 1, wherein said electric coils of said driving unit are either mounted on said upper casing or said lower casing or both said upper casing and said lower casing.

3. The axial flow type cooling fan according to claim 1, wherein said electric coils and said permanent magnets of said driving unit are installed in any desired number.

4. The axial flow type cooling fan according to claim 1, wherein said driving unit comprises said electric coils and said permanent magnets or any other driving elements that provide a driving force.

5. The axial flow type cooling fan according to claim 1, further comprising a seat in said inner space for supporting and guiding said rotor assembly.

6. The axial flow type cooling fan according to claim 1, wherein said blades of said rotor assembly are installed in any desired number.

7. The axial flow type cooling fan according to claim 1, wherein said permanent magnets are inserted in said peripheral rim of said rotor assembly.

8. The axial flow type cooling fan according to claim 1, wherein said blades, said central shaft and said peripheral ring of said rotor assembly form an integral body.